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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/762,718 | 01/22/2004 | Yashavant Vinayak Vinod | FL0239USNA | 5200 |

23906 7590 07/11/2005

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
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WILMINGTON, DE 19805

| EXAMINER | |
|---|---|
| HURLEY, SHAUN R | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3765 | |

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/762,718 | VINOD ET AL. | |
| | Examiner | Art Unit | |
| | Shaun R. Hurley | 3765 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08/12/04, 02/23/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, and 7-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al (6132866) in view of Windley (4295329).

Nelson teaches a yarn blend comprising fluoropolymer (including ethylene copolymer) fiber and polyamide (Abstract; Column 2 lines 11-20; lines 43-58). While Nelson essentially teaches the invention as detailed, including many different possible yarn structures (Column 3, lines 22-35), he fails to specifically teach commingled yarn structure, which Windley teaches (Abstract; figure 1). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the commingled structure as taught by Windley in the yarn blend of Nelson, so as to enable a reasonable blend of the composite components while increasing the overall yarn strength. The ordinarily skilled artisan would understand that utilizing a commingled yarn as opposed to a blended yarn would provide a substructure more capable of providing strength above that of a staple blend, and would know to do such, so as to improve the yarn strength in a known manner. In regards to multiple yarns, Nelson teaches rations of the fibers in the blend (Column 2 line 66 - Column 3 line 4) which would obviously teach multiple ends of either the fluoropolymer or the amide to fulfill such ratios. In regards to the myriad requirements of strength of both the component yarns, and the overall yarns, all are

properties based upon the structure and materials utilized, both of which are taught in the prior art of record as detailed above. As such, the resultant strengths are likewise obviously taught. In regards to a binder fiber in the yarn blend, such binder fibers are well known in the art as a way to bind together component fibers, adding strength to the yarn and preventing yarn deconstruction, and such use is well within the scope of the ordinarily skilled artisan's knowledge.

3. Claims 1 and 4-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al (6132866) in view of Van Hook (5802839).

Nelson teaches a yarn blend comprising fluoropolymer fiber and polyamide. While Nelson essentially teaches the invention as detailed, including many different possible yarn structures, he fails to specifically teach a stranded, corded yarn structure, which Van Hook teaches (Figure 3). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the stranded cord structure as taught by Van Hook in the yarn blend of Nelson, so as to enable a reasonable blend of the composite components while increasing the overall yarn strength. The ordinarily skilled artisan would understand that utilizing a stranded cord yarn as opposed to a blended yarn would provide a substructure more capable of providing strength above that of a staple blend, and would know to do such, so as to improve the yarn strength in a known manner. In regards to multiple yarns, Nelson teaches rations of the fibers in the blend which would obviously teach multiple ends of either the fluoropolymer or the amide to fulfill such ratios. In regards to the myriad requirements of strength of both the component yarns, and the overall yarns, all are properties based upon the structure and materials utilized, both of which are taught in the prior art of record as detailed

above. As such, the resultant strengths are likewise obviously taught. In regards to a binder fiber in the yarn blend, such binder fibers are well known in the art as a way to bind together component fibers, adding strength to the yarn and preventing yarn deconstruction, and such use is well within the scope of the ordinarily skilled artisan's knowledge.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Windley as applied to claims 1, 2, and 7-19 above, and further in view of Hatch (TEXTILE SCIENCE).

The combination of Nelson in view of Windley essentially teaches the invention as discussed above, but fails to specifically teach the dying of one component and leaving the second component undyed, which Hatch teaches is well known in the dyeing art (multiple dyeing methods, pages 226-243). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize such a dying technique, so as to create a heather look in the yarn. The ordinarily skilled artisan would know how to do this since such methods are well known, and would understand the aesthetic benefits of such a dyeing choice.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cistone et al (2002/0155289) teaches what is well known in the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaun R. Hurley whose telephone number is (571) 272-4986. The examiner can normally be reached on Mon - Fri, 6:30 am - 3:00 pm, off second Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John J. Calvert can be reached on (571) 272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SRH
06 July 2005

Shaun R Hurley
Patent Examiner
Tech Center 3700